

REMARKS

Reconsideration of the above-identified application in view of the present amendment is respectfully requested. By the present amendment, claims 4, 6, 9, 10, and 12 have been cancelled. Claims 1-3, 5, 8, 11, 15, 21, and 22 have been amended. Claims 23 and 24 have been added. Claims 1-3, 5, 7, 8, 11, and 13-24 are pending in the application.

Claim 1 recites an inflation fluid source (inflator) comprising means for inflating an inflatable vehicle occupant protection device (inflatable curtain) to a pressure that is a *defined mathematical function* of the thickness of the protection device. This pressure is sufficient to prevent the head of the occupant from striking the side structure through the thickness of the inflatable curtain. This means for inflating the inflatable curtain to a pressure that is a defined mathematical function of curtain thickness is a unique structural characteristic of the inflator. The prior art does not teach or suggest an inflator having this structure.

An inflator constructed in accordance with the present invention provides a distinct advantage over the prior art. In the prior art, the characteristics of the inflator (e.g., the volume and pressure of the stored inflation fluid) depends on experimentation and the collection of empirical data. The present invention avoids this and thus may provide significant savings in terms of time and cost.

Claims 1 and 14-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cherry (U.S. Patent No. 6,022,044)

in view of Bohman et al. (Paper No. 98-S8-O-07, 16th ESV Conference, June 1-4, 1998, Windsor, Canada).

For reasons detailed below, it is respectfully submitted that Cherry and Bohman et al. do not teach or suggest an inflator adapted to provide a volume of inflation fluid sufficient to inflate an inflatable curtain to a pressure that is a defined mathematical function of the thickness of the curtain. To the contrary, Bohman et al. teaches an inflator for inflating an inflatable curtain to an empirical pressure. In Bohman et al., this empirical pressure is determined empirically, through trial-and-error experimentation, wherein the inflatable curtain air bag is tested at a range of inflation pressures to determine the specific pressure at which desired performance characteristics of the curtain are achieved.

In Bohman et al., the curtain was inflated to various pressures in order to evaluate its performance. Bohman et al. states, beginning with the last paragraph on page 5, that a range of pressures between 0.5 and 2.0 bar were tested. Bohman et al. goes on to state that, in this range, a pressure of 1.5 bar is required to prevent strike through.

By the teachings of Bohman et al., for any given inflatable curtain, a range of pressures would be tested to determine the required pressure. This is precisely what the present invention intends to avoid. By providing an inflator comprising means for inflating the inflatable curtain to a pressure that is a defined mathematical function of curtain thickness, the present invention eliminates the need for

experimentation and the collection of empirical data. The inflation fluid pressure is purely a defined mathematical function of the curtain thickness.

It is respectfully submitted that Cherry and Bohman et al., alone or in combination, do not teach or suggest all of the features recited in claim 1. Therefore, the rejection of claim 1 under 35 U.S.C. 103(a) should be withdrawn. Claims 3 and 14-20 depend either directly or indirectly from claim 1. Therefore, the rejection of claims 3 and 14-20 under 35 U.S.C. 103(a) should also be withdrawn.

Claims 1-3, 5, 7, 8, 11, and 13-22 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites that the inflator is actuatable to inflate the inflatable curtain to a pressure that is a defined mathematical function of the thickness of the curtain when inflated. Those having ordinary skill in the art would recognize the phrase "when inflated" to mean the time at which the protection device is inflated and deployed to a position for helping to protect an occupant of the vehicle. Thus, the pressure recited in claim 1 is the pressure at the time the protection device is inflated and deployed to a position for helping to protect an occupant of the vehicle. This is supported in the specification of the present invention as well as in the prior art cited in the Office Action.

The specification states that the inflation fluid in the protection device is at the pressure recited in claim 1 when

the protection device is inflated to the predetermined thickness illustrated at "T" in Fig. 3. (See page 10, line 12, et seq.) The specification also states that the protection device, when inflated to the position of Figs. 2 and 3, is positioned to help protect the vehicle occupant. (See page 8, line 22 through page 10, line 18.) Thus, the specification makes it clear that the inflation fluid in the protection device is at the pressure recited in claim 1 at the time the protection device is in the inflated position of Figs. 2 and 3. The specification also makes it clear that the inflated position of Figs. 2 and 3 is the position to which the protection device is inflated to help protect the vehicle occupant.

The prior art cited in the Office also supports this position. Cherry (U.S. Patent No. 6,022,044) discloses a protection device that, *when inflated*, is located between the vehicle occupant and the side structure to help protect the occupant in the event of a side impact or rollover. (See column 2, lines 22-26).

For these reasons, it is submitted that one having ordinary skill in the art would consider the phrase "when inflated," when used with respect to the inflatable curtain, to mean at the time the protection device is inflated and deployed to a position for helping to protect an occupant of the vehicle.

Also, as stated above, claim 1 recites the novel structure of the inflator. The structure is that the inflator includes means for inflating the inflatable curtain to a

pressure that is a defined mathematical function of the thickness of the curtain. In other words, the "size" of the inflator, i.e., the volume and pressure of the inflation fluid stored in the inflator, is according to a defined mathematical function that relates inflation pressure to the thickness of the inflatable curtain. The method by which the inflator is constructed doesn't matter as long as the inflator is apparatus has this structure. For these reasons, it is submitted that claim 1 is recited in proper apparatus form, the rejection under 35 U.S.C. 112, second paragraph, are improper and should be withdrawn, and all of the features recited in claim 1 must be given patentable weight.

For the reasons set forth above, it is respectfully submitted that claim 1 is allowable. Claims 3, 14-20, 23, and 24 depend either directly or indirectly from claim 1 and are therefore allowable as depending from an allowable claim and for the specific features recited therein.

Claims 2 and 8 have been amended to independent form and include the limitations of their base claims and any intervening claims. Applicants therefore submit that claims 2 and 8 are allowable, as indicated in the Office Action. Claims 5, 7 and 21, depending from claim 2, and claims 11, 13 and 22, depending from claim 8, are therefore allowable as depending from an allowable claim and for the specific features recited therein.

In view of the foregoing, it is respectfully submitted that the above identified application is in condition for

allowance, and allowance of the above-identified application
is respectfully requested.

Please charge any deficiency or credit any overpayment in
the fees for this amendment to our Deposit Account
No. 20-0090.

Respectfully submitted,



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